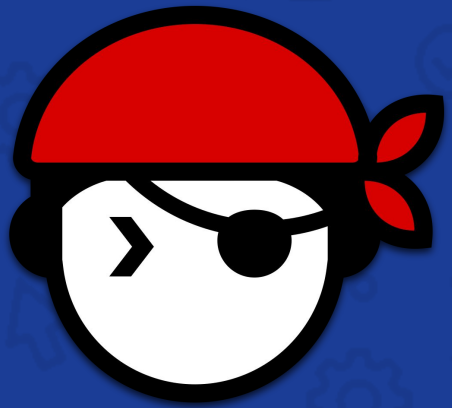
Tampa Devs Meeting

July 13, 2023



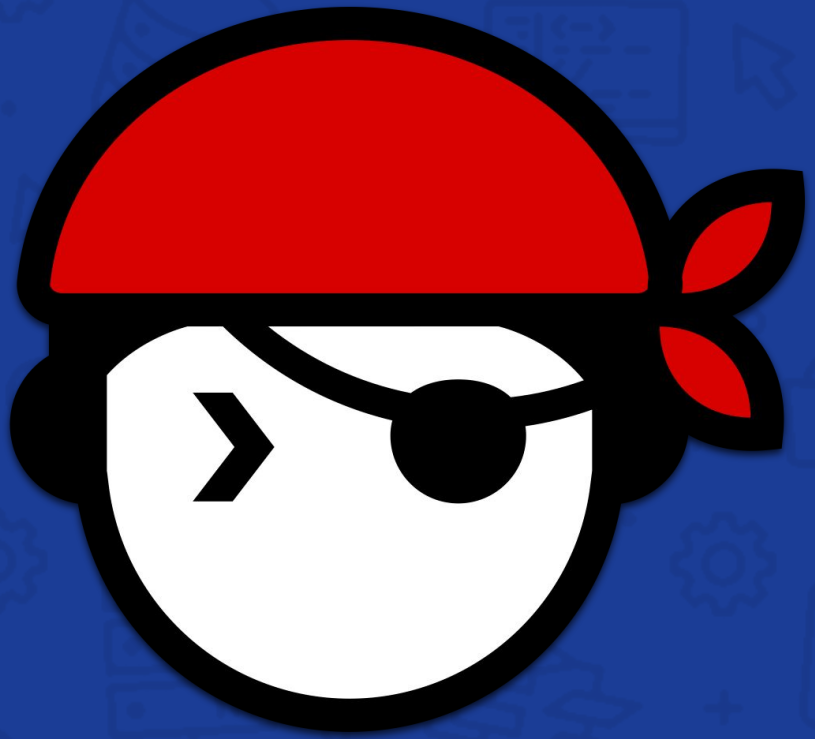
Embarc Collective

PITISCI & ASSOCIATES
YOUR SUCCESS IS THE CORNERSTONE OF OUR BUSINESS

Agenda

- About Tampa Devs
- Event & Program Updates
- Main Talk

“A community of Software Developers, seeking to grow together”.



We’re a Registered Nonprofit

Tampa Devs is a registered 501(c)3 nonprofit with 509(a)(2) public charity status.

Full Legal Name: Tampa Devs Inc

EIN: 92-0619339

Address: 6421 N Florida Ave D-1470
Tampa, FL 33604

Our Vision, Our Impact

Our mission is to...

- Continue hosting **bigger, better, and more fun** networking events.
- **Grow and market Tampa Bay** as an industry-leading technology hub.
- Create **career-building experiences** for our members, such as hackathons, tech workshops, and more
- Give **support and mentorship to student organizations** at USF, UT, etc and their related club chapters.
- Provide **logistical and financial support** for other specialized tech meetups such as Data Science group
- **Issue scholarships** to career transitioners and those in pursuit of higher education in technology.

Embarc
Collective

Upcoming Events

July 26 – Networking Event

TDevs - Meet & Greet @ Armatureworks [with Java User Group]

Hosted By
Josef S. and 3 others

Organizer tools

Tampa Devs
Public group
★★★★★ (148)

Wednesday, July 26, 2023 at 6:30 PM to Wednesday, July 26, 2023 at 9:30 PM EDT
Add to calendar

Armature Works
1910 N Ola Ave · Tampa, FL

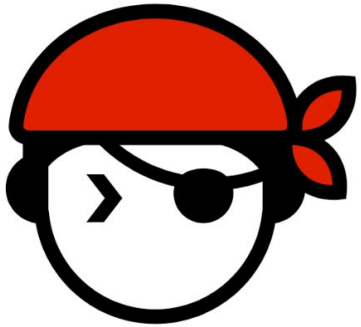
September 21 – DevOps Days Tampa Bay

September 21, 2023
Thursday, 8am-5pm
At Armature Works in Tampa, FL

Join us!

In-person one day event!
Limited space
Tickets on sale now

Tampa Devs



IS A PROUD COMMUNITY SPONSOR OF

DEVOPS DAYS TAMPA BAY

BayHacks Hackathon

Mentorship Program

Mentorship Program

Registered Users

36 ↑ 2 in last 7d

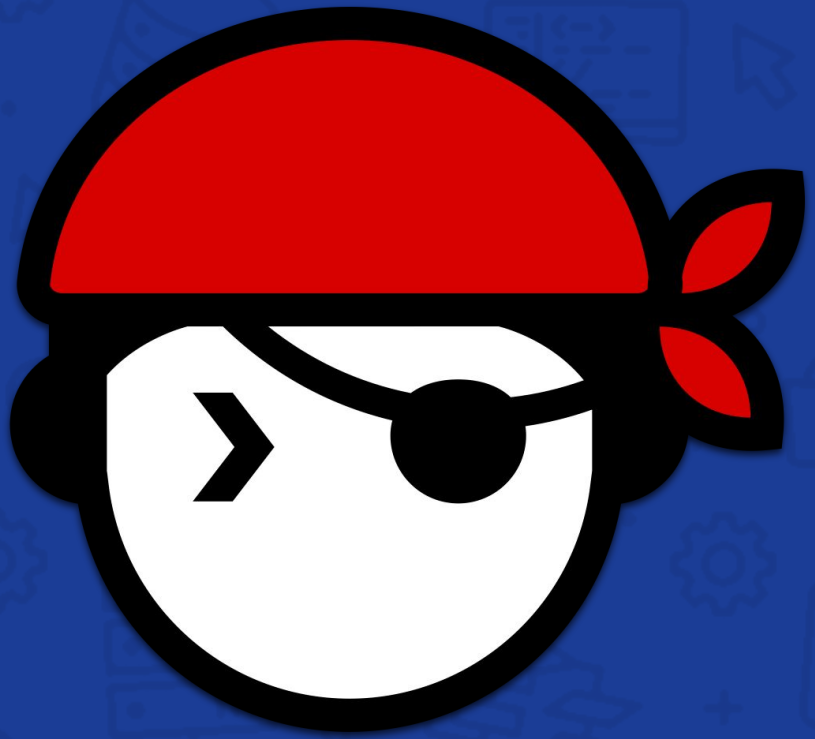
Active Pairings

10 ↑ 1 in last 7d

Sessions

1 Scheduled **22** Completed ↑ 3 in last 7d

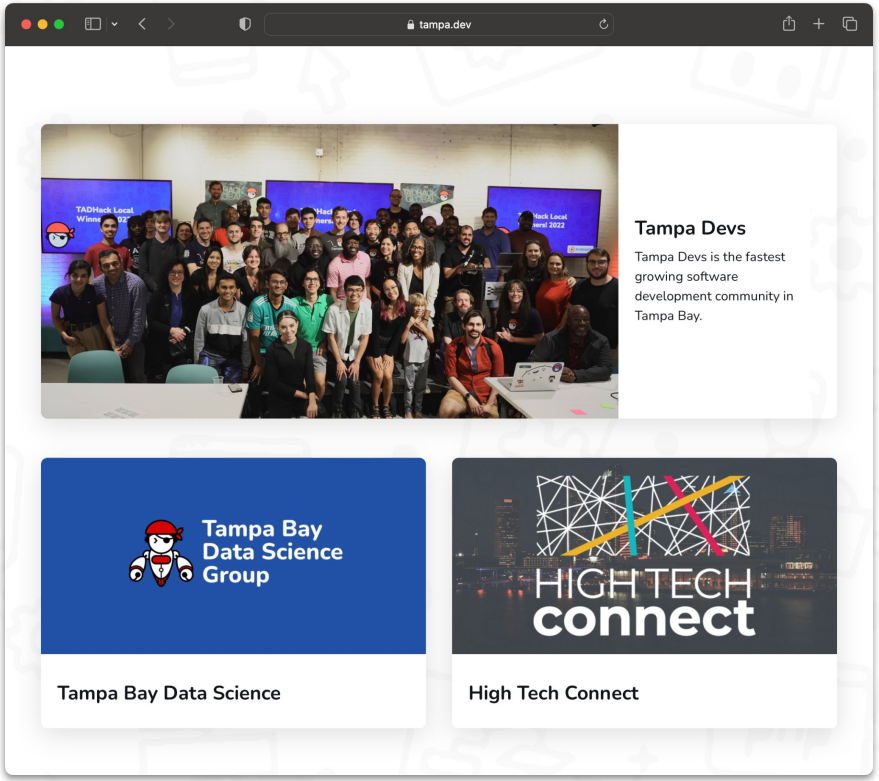
go.tampa.dev/mentorship



Tampa Devs Online

Join 882 of Us on Slack!

go.tampa.dev/slack



Tampa Tech Community Page

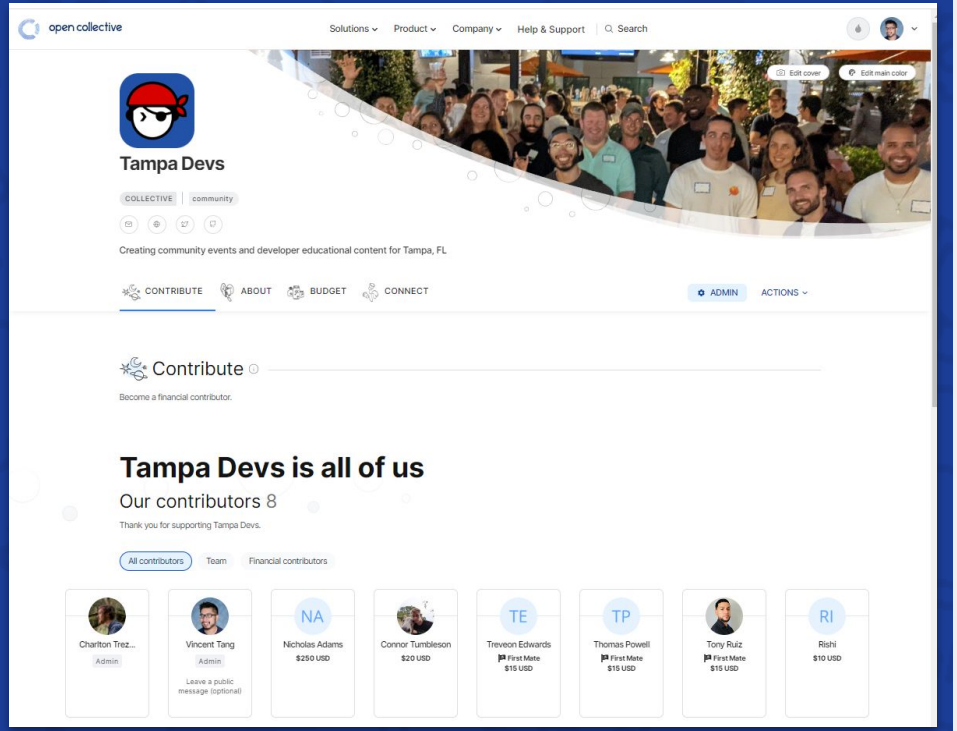
Check out

tampa.dev

Give Support, Get Swag

Check out

store.tampa.dev



Donate to Tampa Devs

Go to

tampa.dev/donate

github.com/tampadevs

Tampa Devs

A community of software developers in Tamp

11 followers · United States of America · http

@tampadevs · hello@tampadevs.com · Verifie

Overview · Repositories 10 · Projects

Connect With Us

@tampadevs

#tampadevs

tampadevs.com

go.tampa.dev/slack

The reverse job board for Tampa Bay's Developer Community

Tampa Devs Talent empowers local developers and supports social good.
Stop combing through job listings and kick back while companies reach out to you!

Get started Learn more

New awesome loval developers on Tampa Devs Talent

New Developer

Actively looking

New profile

Share your knowledge!

speakers@tampadevs.com

go.tampa.dev/speak

Ibis AM

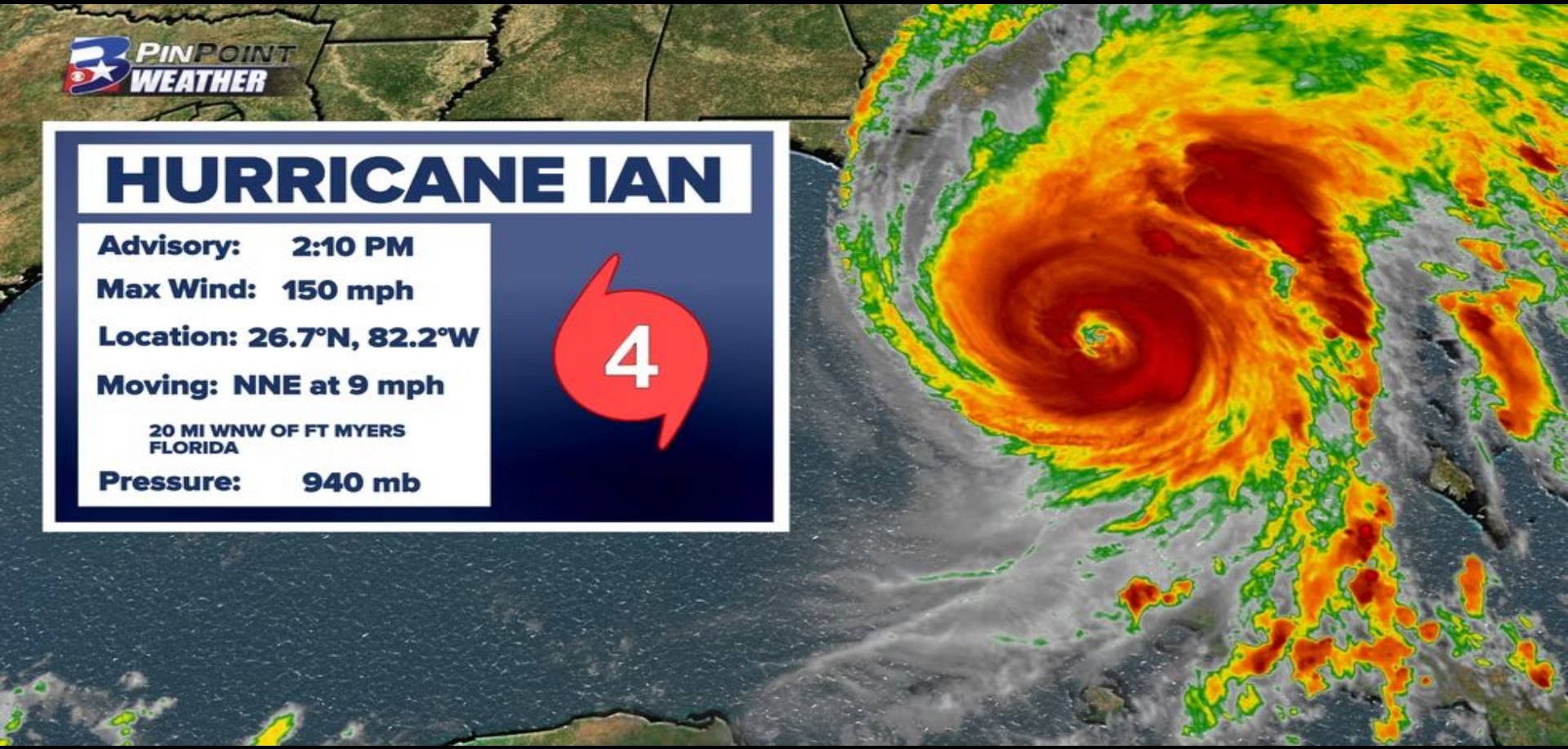
Kevin Brown & Charlton Trezevant

Hello.

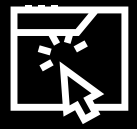
Ludum Dare
The original game jam for everyone

Every 10 seconds something happens

September 30th - October 3rd


PINPOINT WEATHER
HURRICANE IAN
Advisory: 2:10 PM
Max Wind: 150 mph
Location: 26.7°N, 82.2°W
Moving: NNE at 9 mph
20 MI WNW OF FT MYERS FLORIDA
Pressure: 940 mb
4

The **Agenda.**



Godot Tour

Show off the Godot game engine through the creation of simple fish Ai.

Updating

Illustrate a conventional project structure by updating a level in game.

Shipping

Dissect the build pipeline as we release the update live on Steam.

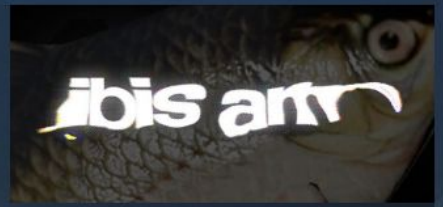
I will now make ***fish***

We are done making ***fish***

All Games > Simulation Games > IBIS AM

IBIS AM

Community Hub



All I want you to do is catch fish and search for others who seem hungry. You are only a bird.

ALL REVIEWS: Positive (22)

RELEASE DATE: Feb 17, 2023

DEVELOPER: The Water Museum
PUBLISHER: The Water Museum

Popular user-defined tags for this product:

Adventure | Indie | Casual | Simulation | 3D | +

SCAN ME

Following | Ignore | View Your Queue

IN LIBRARY IBIS AM is already in your Steam library

Buy this game as a gift for a friend

Buy IBIS AM

SPECIAL PROMOTION! Offer ends in 42:38:38

-50% ~~$1.99~~ $0.99 Add to Cart

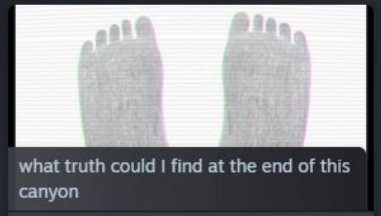
1 friend wants this game.

Is this game relevant to you?

- 40 hours played
- User reviews: Positive
- 1 friend wants this game:

COMMUNITY CONTENT ?

American Dove Mitten



American Dove Mitten

American Dove Mitten

apterous

American Dove Mitten

ぞうさんのぶどう畑

Dr. Permixtus

drop me awp
57 products in account
2 reviews

Recommended
4.4 hrs on record

POSTED: FEBRUARY 20

I ate the fish

J to the Z
24 reviews

Recommended
0.4 hrs on record

POSTED: MARCH 12

I think this is probably what drugs are like.

IrrelevantEllis
34 reviews

Recommended
2.1 hrs on record (2.0 hrs at review time)

POSTED: MARCH 11

If you like Fortnite then you'll like this

The AM Birds

1 - 15 of 200 entries — Page 1 2 3 ... 14 >>

#1	raw	2,511
#2	Check "Shelltered" on Storepage	1,019
#3	kevin.brown	924
#4	American Dove Mitten	381
#5	Dr. Permixtus	272
#6	ぞうさんのぶどう畑	243
#7	Asaklair	224
#8	drop me awp	210
#9	ンヴ(シ)	205
#10	magneter06	194
#11	Tey	183
#12	zanderwithaz	169
#13	yaBoi	165
#14	Kindvirus	161
#15	TzeentianLoyalty	157

1 - 15 of 200 entries — Page 1 2 3 ... 14 >>

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1 - 15 of 200 entries — Page 1 2 3 ... 14 >>

I will now **update a level**

Xpirit

Now, Let's Ship It!

Let's connect!

@chtzvt

blog.ctis.me

Charlton Trezevant

Application Security Consultant

Xpirit USA

ctrezevant@xpirit.com

Agenda

- All About GitHub Actions
- CI & CD for Game Developers
- Real-World Deep Dive

End Goals

Great Experiences for Developers and Players

1. Reach players with a uniformly great game experience on as many platforms as possible.

2. Consistent and fast releases of updates on all supported platforms simultaneously.

3. Make the release process as simple and automatic as possible. Let developers focus on bugfixes and shipping new content.

All About Actions

Pipelines: GitHub Actions

Generic workflow engine: automate anything

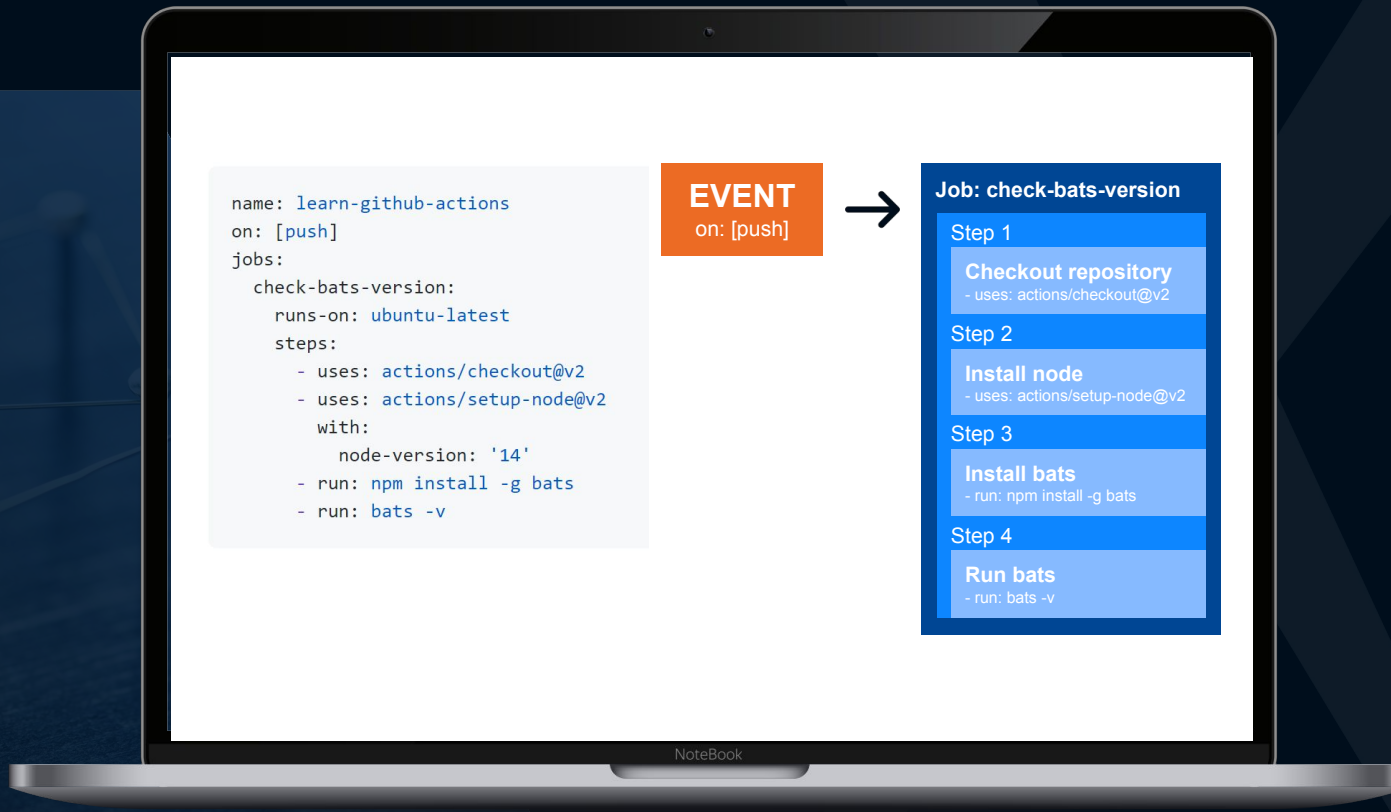
Workflows = text-based file in your repo (yaml)

Actions = building blocks in your workflow

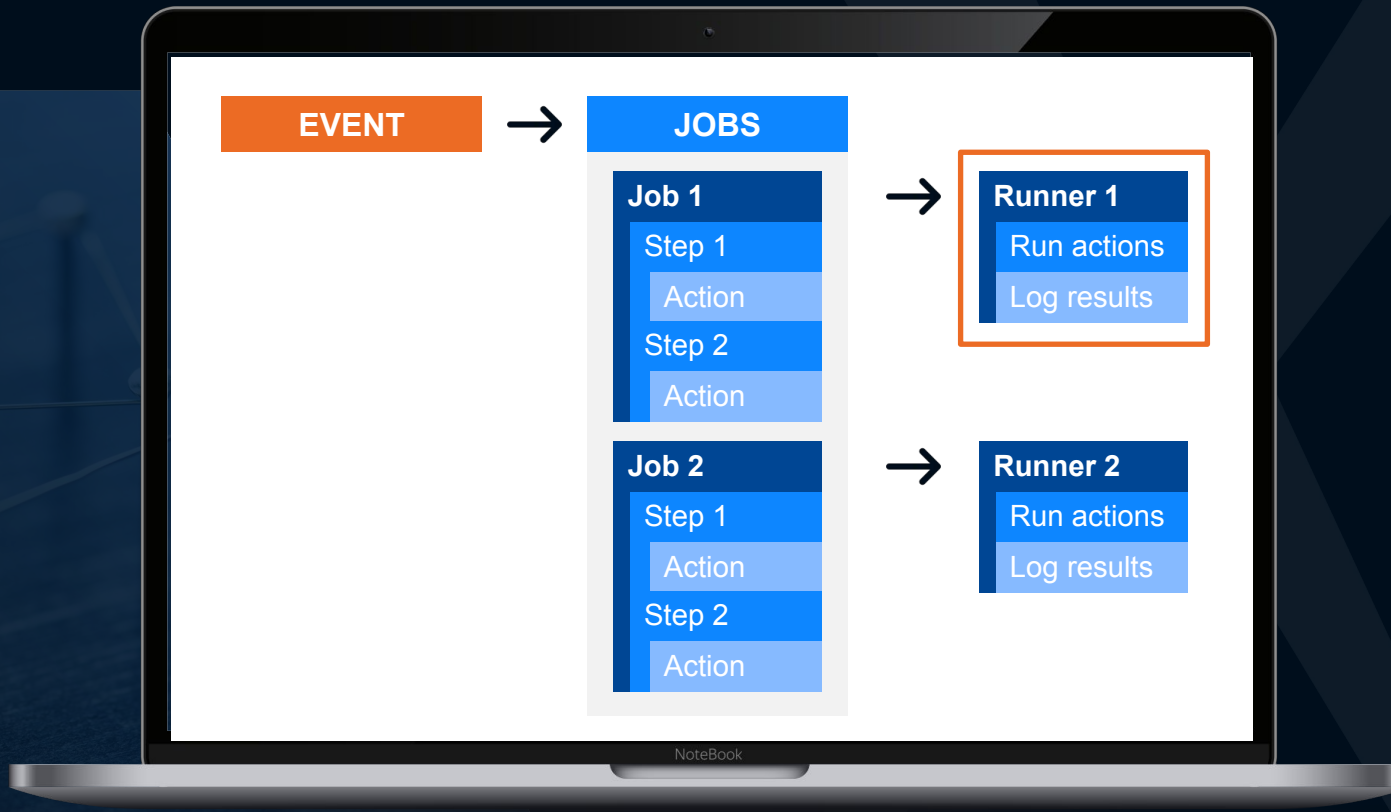
Jobs = collection of steps

Step = shell script or calling an action

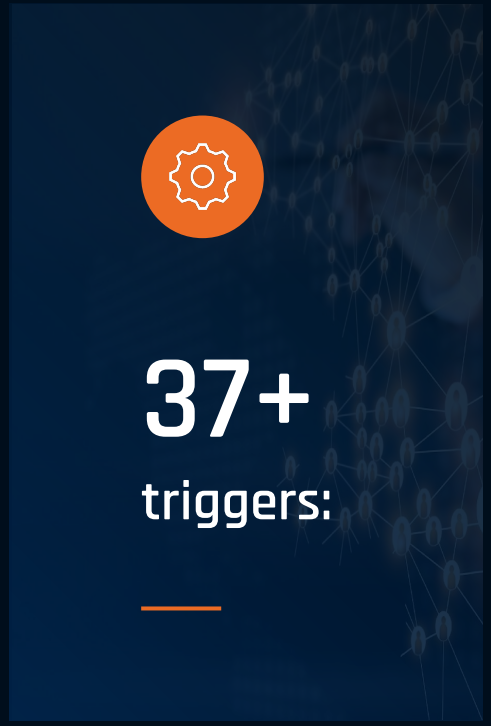
Yaml workflow definitions



Anatomy of a workflow



Pipelines: GitHub Actions



37+

triggers:

- Manual (workflow_dispatch)
- On: push
- On: pull_request
- On: issue
- On: page_created
- All (repository_dispatch)
- On: issue_comment
- On: release

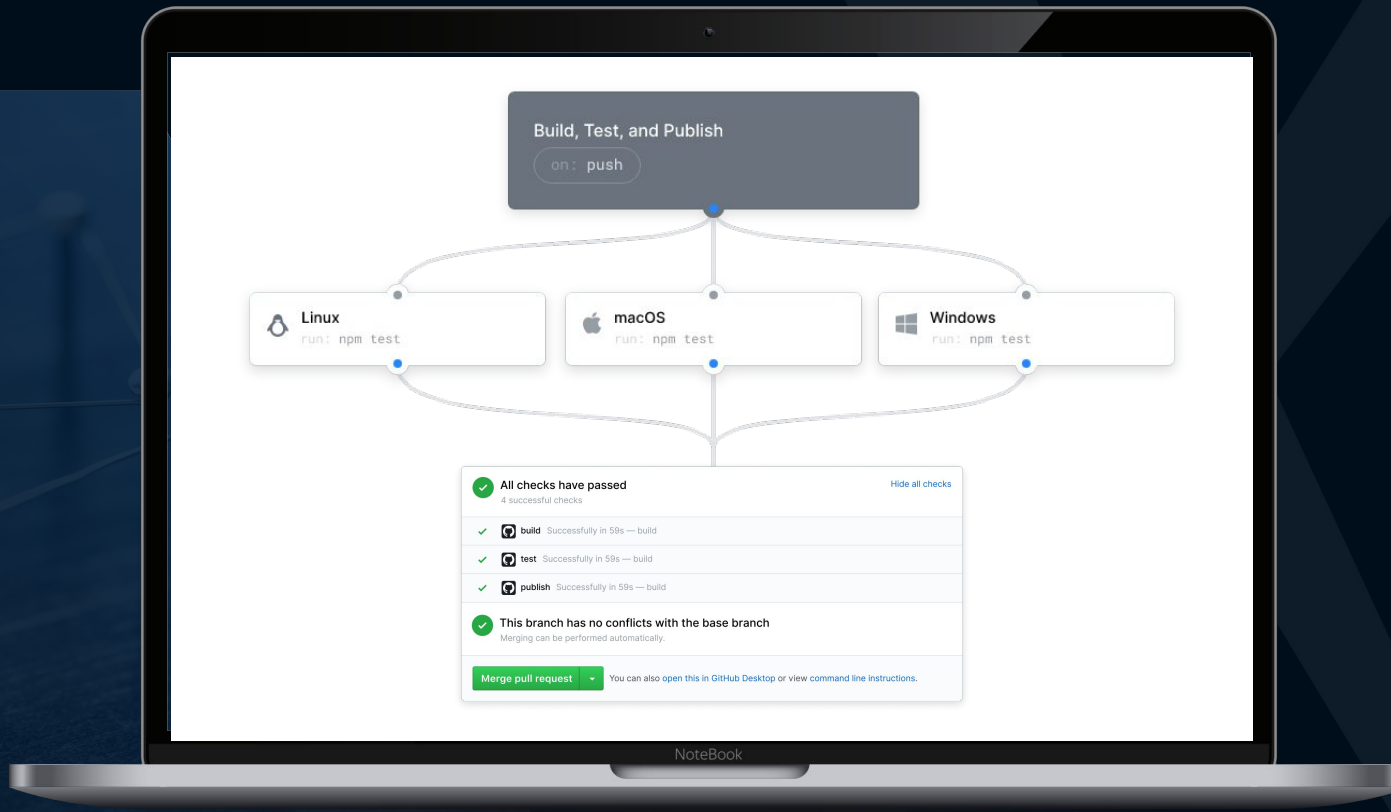
Runners

- **GitHub Hosted**
- **Hosted on Azure (Standard_DS2_v2 virtual machines)**
- **GitHub managed, running in your VNET is on its way**

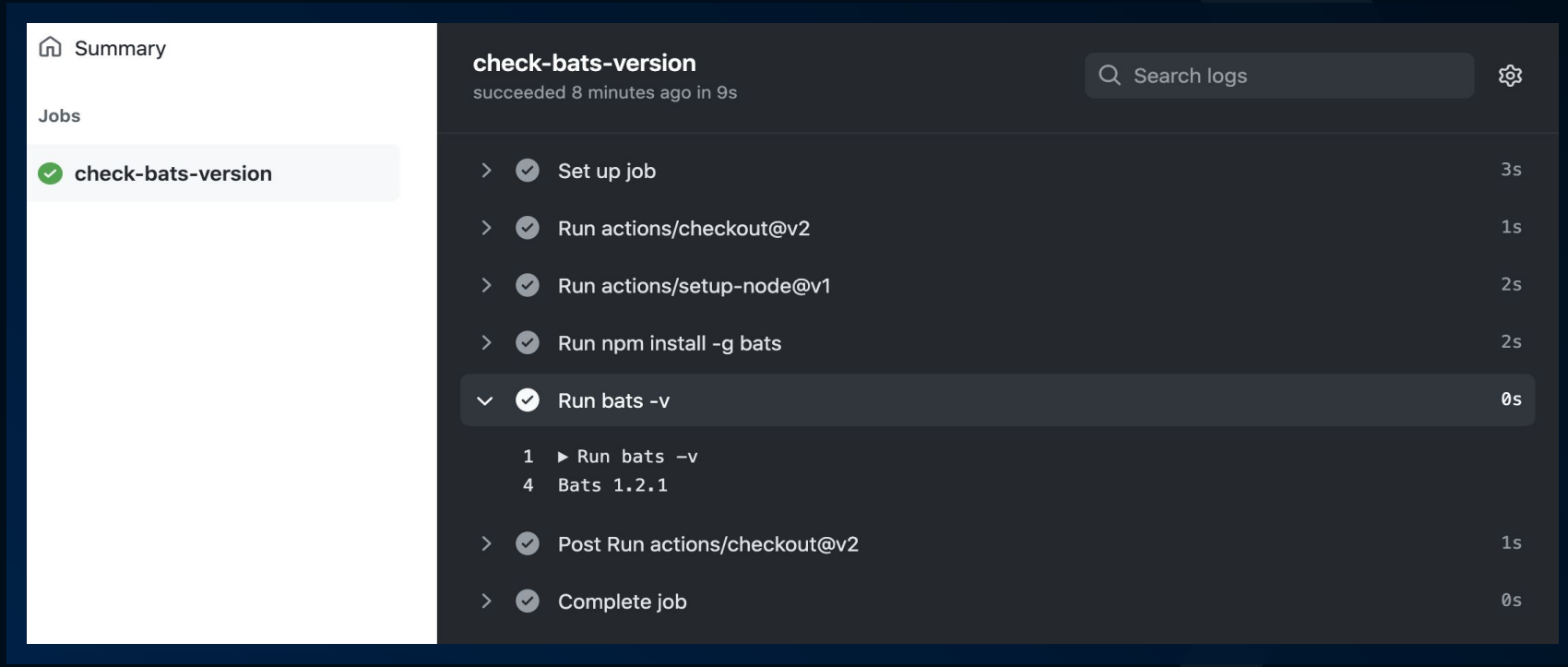
- **Mac is hosted on GitHub's own macOS Cloud.**
  - The Linux and macOS virtual machines both run using passwordless sudo

> **Note:** If you use an IP address allow list for your GitHub organization or enterprise account, you cannot use GitHub-hosted runners and must instead use self-hosted runners. For more information, see "About self-hosted runners."

Hosted environments



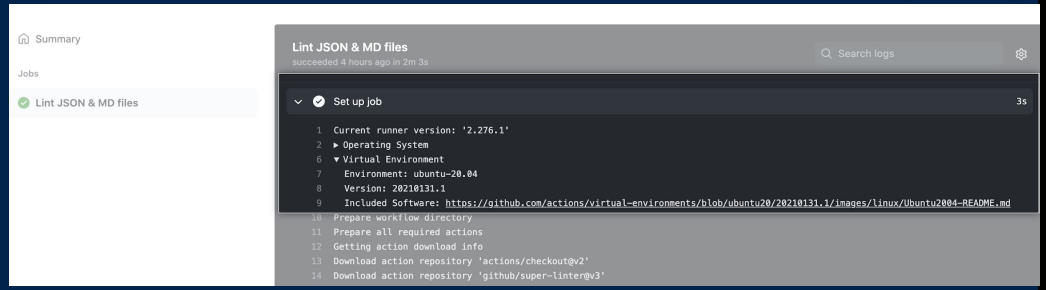
Job runner logs



Demo: github-actions-requests

Pre-installed software

- Look at the install logs of “Set up job” step



- GitHub-hosted runners are updated weekly

- If there is a tool that you'd like to request, please open an issue at actions/virtual-environments

Runners - specs

Standard:

Hardware specification for Windows and Linux virtual machines:

- 2-core CPU (x86_64)
- 7 GB of RAM
- 14 GB of SSD space

Hardware specification for macOS virtual machines:

- 3-core CPU (x86_64)
- 14 GB of RAM
- 14 GB of SSD space

Larger runners (Beta)

Size (vcpu)	Memory (GB)	Storage (SSD)
4 cores	16 RAM	**150 GB**
8 cores	32 RAM	**300 GB**
16 cores	64 RAM	**600 GB**
32 cores	128 RAM	**1200 GB**
64 cores	256 RAM	**2040 GB**

Feature: GPU enabled runners

https://github.com/github/roadmap/issues/505

Pricing

Private repositories

INCLUDED MINUTES	
Free	**2,000** minutes per month
Pro	**3,000** minutes per month
Team	**3,000** minutes per month
Enterprise	**50,000** minutes per month

ADDITIONAL HOSTED RUNNER MINUTES	
Linux 2 cores, 7GB	**$0.008** per minute
Windows 2 cores, 7GB	**$0.016** per minute
macOS 2 cores, 7GB	**$0.08** per minute
Self-hosted	**Free**

Included, hosted runner minutes are consumed at different rates for each operating system. GitHub Actions is not available for private repos in legacy per-repository plans. Learn more

Game Development

Game Development is Unique

- Engine-Centric Development Workflow
- Large Assets
- Complex Toolchain
- Long Build Times
- Native-Centric
  - Large builds shipped to customers
  - Diverse consumer hardware targets
  - Many ways things can break/bug out
  - Console builds are another beast entirely
  - Storefronts are hard!

Engines are Special

- Integrated IDEs where code is not a first-class citizen
- Small changes often produce huge diffs

Our Challenges

Small Team, Limited Resources

Manage Complexity and Cost

Manage Releases on Tons of Platforms

Consistency & Reusability

Ensure Quality, Great Player Experience

Security

Scaling is Hard

(# builds) * (# stores) +
(# console releases)

Other Considerations

- "Anyone Can Deploy"
- Each store/target has a bespoke toolchain & release process
- Dependency management
- Isolate code issues from build issues
- Feature Flags & Embedded Build Information
  - Enabling/disabling Steam SDK
  - Performance optimizations
  - Testing features (noclip, etc)

End Goals

Great Experiences for Developers and Players

1. Reach players with a uniformly great game experience on as many platforms as possible.

2. Consistent and fast releases of updates on all supported platforms simultaneously.

3. Make the release process as simple and automatic as possible. Let developers focus on bugfixes and shipping new content.

Success

Oh for sure, it literally feels like I'm cheating only having to click like 2 buttons and having it do everything automatically. Can't thank you enough than I have already but I will continue thanking you regardless

If your job doesn't think these actions are fantastic Imma need a word with them

Let's Dive In

Cost & Efficiency Tips

Avoid repeat work. Share and use caches wherever possible

Use Linux runners. Optimize build times, concurrency, and artifact retention

Avoid surprises. Monitor and limit spending in the billing dashboard

GitHub - Community

https://xpir.it/github

- XPRT magazine articles
- Ask the Expert sessions
- Rob Bos: Conference talks at GitHub InFocus 2021, GitHub Universe 2021, NDC Security (2022), Techorama BE (2022), and others
  - How to use GitHub Actions with Security in mind
  - Protect your code with GitHub security features (Code signing + Advanced Security)
- Rob Bos: LinkedIn Learning Course on GitHub Advanced Security
- Book: Accelerate DevOps with GitHub (Michael)
- Blog posts galore!
  - Best practices for Actions
  - Internal Actions Marketplace
  - Self-hosted runners on Kubernetes
  - GitHub tokens and best practices
- GitHub workshop: Code to Cloud
- GitHub Workshop: VisugXL BE
- Pluralsight course
- GitHub Community Stuttgart

Thank You!